



**basic education**

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

**UKUHLOLA KUKAZWELONKE KUKA 2015  
UMHLAHLANDLELA WOKUHLOLA  
IMATHEMATHEKISI - ISIZULU  
IBANGA LESI-2**

**ISINGENISO**

Kulonyaka ka-2015 ukuhlola kukaZwelonke konyaka nonyaka (ANA 2015) kuzokwenziwa ngoMandulo (September) 2015 kuzo zonke izikole zomphakathi kanye nalezo ezikhethiwe ezizimele. Kulesi sikhathi bonke abafundi beBanga loku-1 kuya kwelesi -3 bayobhala izivivinyo zikaZwelonke zoLimi kanye neZibalo. Imiphumela iyosetshenziswa ukubika ngenqubekela phambili ehambisana nokufinyelela emibonweni eyamiswa ku-*Action Plan 2014 Towards Schooling 2025*.

Izivivinyo zokuhlola zikaZwelonke zonyaka nonyaka (ANA) ziyobhalwa ngethemu yesithathu, ngakho-ke uMnyango wezeMfundo Emazingeni Aphansi (DBE) uhlinzeke ngomqulu ongumhlahlandlela webanga ngalinye kanye nesifundo ngasinye (soLimi kanye neZibalo) kulokho okulindelekile ukuba abafundi bakwazi baphendule imibuzo equkethwe yikharikhulamu yabo okungenani ngempumelelo elindelekile. Umhlahlandlela wokuhlola kukaZwelonke konyaka nonyaka ka-2015 wenziwe wahambisana nokuhlelwa kwekharikhulamu abafundiswa yona kuleli zinga.

**IZINGA ELIYISISEKELO:**

Ebangeni loku-1 kuya kwelesi-3 izivivinyo ziyogxila emsebenzini ohlelelwe amathemu amathathu okuqala onyaka. Ngokwala mabanga uMhlahlandlela Wokuhlola uhlelwe waba amakhalamu amathathu nemigqa. Amakhono azohlolwa atholakala kwikhalamu yokuqala, ingqikithi yomsebenzi ikwikhalumu yesibili bese kuthi amakhono ahlolwayo atholakale kwikhalamu yesithathu. Kubalulekile ukuba uqaphele ukuthi uMhlahlandlela Wokuhlola kukaZwelonke konyaka nonyaka kuka-2015 awuqondile ukuthi

lokhu okutholakala kuwo yikhona kuphela okumele kufundiswe kunyaka wonke. Kunalokho, uMhlahlandlela Wokuhlola unikeza umsebenzi okumele ufundiswe kuze kuyofika ethemini yesithathu yalowo nyaka.

Othisha balindeleke ukuba bawusebenzise umhlahlandlela kanye nezinye izinsiza-kufundisa uma befundisa noma behlola umsebenzi.

<b>INGXENYE YOLWAZI</b>	<b>IZIHLOKO</b>	<b>ULWAZI NAMAKHONO AZOHLOLWA</b> <b>Ukuhlola ukuthi umfundi uyakwazi:</b>
<b>IZINAMBA, IZIMPAWU KANYE NOBUDLELWANO BAZO</b>	Izimpawu namagama ezinombolo	ukubhala izimpawu zezinombolo kusuka ku 0 –180 ukubhala amagama ezinombolo kusuka ku 0 –75
	Chaza, qhathanisa bese uhlela izinombolo	ukuqhathanisa izinombolo eziphelele esebenzisa amagama anjengo-okuncane kuna , okukhulu kuno, kungaphezulu kunokunye,okungaphansi kunokunye nokulinganayo. ukuhlela izinombolo eziphelele kusuka kwencane kuya kwenkulu kanye nezinkulu kuya kwezincane.
	Ubungako benani lezinombolo	Ukuhlukanisa izinombolo ezinamadijithi ahamba ngamabili aziyise kumashumi nangokukodwa. ukubona bese esho inani lezinombolo ngayinye.
	Amasu/amasu okuxazulula izinkinga zezibalo.	ukuphinda kabili abuye ahlukalise kabili. ukwakha nokuhlakaza izinombolo. ukudweba umugqa wezinombolo.
	Ukuhlanganisa nokususa.	ukusebenzisa izimpawu ezifanele ( +, - , $\square$ , = ) ukuhlanganisa kufike kuma-75.

INGXENYE YOLWAZI	IZIHLOKO	ULWAZI NAMAKHONO AZOHLOLWA  Ukuhlola ukuthi umfundi uyakwazi:
		ukususa kufike kuma-75.
	Ukuhlanganisa ngokuphindayo okuholela ekuphindaphindeneni	ukuphindaphinda izinombolo kusukela kweyoku-1 kuya e -10 nokuphindaphinda izinombolo ngo 2, 5 kanye no 4  ukusebenzisa izimpawu ngokufanele ( +, × , □ , = )
	Ukuhlanganisa okuphindayo okuholela ezibalweni zokuphindaphinda	Ukubala usebenzise ukuhlanganisa okuphindayo okunomphumela ofika e-40 (izibalo zengxoxo)
	Ukwenza amaqoqo kanye nokuhlukaniselana okuhlolela ezibalweni zokuhlukanisa.	ukuxazulula izibalo zengxoxo ezihambisana nokwahlukaniselana ngokulinganayo ngamaqoqo ezinombolo eziphelele ezifaka imiphumela ezinenselelo .
	Amaqhezu	ukwazi ukubona amaqhezu emidwebeni.

INGXENYE YOLWAZI	IZIHLOKO	<b>ULWAZI NAMAKHONO AZOHLOLWA</b> <b>Ukuhlola ukuthi umfundi uyakwazi:</b>
		<p>Ukusebenzisa futhi abone ingxenye eyodwa yokuphelele kwezimo ezejwayelekile efaka ohhafu, amakota, okukodwa kokuthathu nokukodwa kokuhlanu.</p> <p>ukubhala amaqhezu anjengohhafu owodwa, nokubili kokuthathu.</p>
	Imali	<p>ukuxazulula izinkinga zemali eziyingxoxo ezifaka isamba noshintshi ongamasenti kuze kufike ku-75c kanye namaRandi kuze kufike ku-R75.</p> <p>ukwazi ukubona bese ekhomba imali ewuhlweza -5c, 10c, 20c, 50c, R1, R2, R5 kanye nengamaphepha R10, R20, R50 yaseNingizimu Afrika.</p>
<b>AMAPHETHINI, UKUXHUMANA KANYE NE- ALJEBHRA</b>	Amaphethini ejiyometri	<p>ukukopisha andise/ aqedele/aqhube amaphethini alula enziwe ngokudweba imiqga , izimo kanye nezinto eziphathekayo.</p>
	Amaphethini ezinamba	<p>ukukopisha andise/aqhubeke bese echaza ukulandelana okulula kwezinombolo kuze okungenani kufike ku 180 ngokubala uye phambili nasemuva ngo :</p> <ul style="list-style-type: none"> <li>- 1 kusuka kunoma iyiphi inamba ephakathi kuka 0 –180</li> <li>- 3 kusuka ezinambeni eziphindaphinda ngo 3 eziphakathi kuka 0 -180</li> <li>- 4 kusuka kunoma iziphi izinamba eziphindaphinda ngo 4 eziphakathi kuka</li> </ul>

INGXENYE YOLWAZI	IZIHLOKO	ULWAZI NAMAKHONO AZOHLOLWA Ukuhlola ukuthi umfundi uyakwazi:
		0 –180
INDAWO NESIMO/ NESHEYIPHU (IJIYOMETRI)	Izinto ezinhlangothi ntathu (3-D)	<p>ukubona bese esho izinto ezinhlangothi ntathu (3-D) ekilasini nasezithombeni</p> <ul style="list-style-type: none"> <li>• okusabhola</li> <li>• Okusabhokisi</li> <li>• amasilinda</li> </ul> <p>ukukhomba bese uchaza izimo zejijometri nezinto zansuku zonke ngokusho ukuthi zinesimo sebhola ,esebhokisi noma esesilinda</p> <p>ukuqhathanisa izinto ezingonhlangothi ntathu (3-D) ngobungako , izinto ezingqikayo nezinto ezishelelayo</p>
	Izimo ezinhlangothi mbili (2-D)	<p>ukubona abhale izimo ezingonhlangothi mbili (2-D)</p> <ul style="list-style-type: none"> <li>• zindilinga</li> <li>• onxantathu</li> <li>• Izikwele</li> <li>• nxande</li> </ul>

INGXENYE YOLWAZI	IZIHLOKO	<b>ULWAZI NAMAKHONO AZOHLOLWA</b> <b>Ukuhlola ukuthi umfundi uyakwazi:</b>
		ukuqhathanisa izimo ezingonhlangothimbili (2-D) ngobungako , umubala , isimo , amacala aqondile namacala ayindilinga.
	Isimetri Okufana nse nxazombili	ukubona adwebe umuqga ohlukanisa izimo ezingonhlangothi mbili kwizibalomdwebo nalezo ezingezona ijiyometri.
<b>ISILINGANISO</b>	Isikhathi	<p>ukusho izinsuku zesonto/zeviki ngokulandelana.</p> <p>ukusho izinyanga zonyaka ngokulandelana.</p> <p>ukusho isikhathi ngokwamahora ayi -12 , uhhafu wehora, nekota lehora ewashini lezinti (iwashi eliyi-analogi).</p> <p>ukubala ubude besikhathi nokudlula kwesikhathi.</p>

INGXENYE YOLWAZI	IZIHLOKO	<b>ULWAZI NAMAKHONO AZOHLOLWA</b> <b>Ukuhlola ukuthi umfundi uyakwazi:</b>
	Umthamo/okumumethwe	<p>ukukala , aqhathanise , ahlele bese ebhala umthamo wezitsha eziqukethe uketshezi (isib. umthamo wesitsha esingawuthwala uma sigcwele) ngokusebenzisa ukukala okungenasilinganiso isib. Izipuni , izinkomishi</p> <p>ukukala , aqhathanise , ahlele bese ebhala umthamo wezitsha eziqukethe uketshezi esebenzisa amalitha.</p> <ul style="list-style-type: none"> <li>• amabhodlela amumatha ilitha eli -1</li> <li>• ujeke wokukala onezinombolo nemigqa ekhombisa amalitha</li> </ul>
	Isisindo	<ul style="list-style-type: none"> <li>• ukukala , aqhathanise , ahlele abhale isisindo esebenzisa isikali noma ezinye ezinto ezinesisindo. Isib. amabhuloki, izitini.</li> <li>• ukusebenzisa ulimi olufanele oluhambisana nesisindo, abuye aqhathanise isib. kulula, kuyasinda, kulula kuna, kuyasinda kune.</li> </ul>
<b>UKUQOKELELWA KOLWAZI (IDATHA) LWEZIBALO.</b>	Hlaziya bese uhumusha ulwazi	<p>ukusebenzisa ulwazi kwigrafu yezithombe emele into eyodwa kwigrafu, noma okukodwa kokukodwa okuhambisanayo.</p> <p>ukuphendula imibuzo ngolwazi kwigrafu yezithombe ngokukodwa nokukodwa okuhambisanayo.</p>



